

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Appellant : Alan L. Billings  
Application No. : 10/720,489  
Title : METAL SPIRAL FABRICS FOR CORRUGATOR MACHINES  
Filed : November 24, 2003  
Examiner : Charles, Marcus  
Art Unit : 3682  
Confirmation No. : 4548

745 Fifth Avenue  
New York, NY 10151

May 1, 2008

**APPEAL BRIEF OF APPELLANT**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This is an Appeal from the Final Rejection by the Examiner dated August 09, 2007, which issued in the above-identified application, finally rejecting claims 1, 3, 5, and 7-12; and from the Pre-Appeal Brief Conference decision dated April 1, 2008, confirming the

rejections. A Notice of Appeal was filed on January 9, 2008. This Brief is submitted in accordance with 37 C.F.R. § 41.37 and is accompanied by the requisite fee of \$500.00 as set forth in 37 C.F.R. § 41.20.

**REAL PARTY IN INTEREST**

The real party in interest is Albany International Corp., 1373 Broadway, Albany, New York 12204, to which Appellant has assigned all interest in, to and under this application, by virtue of an assignment recorded on June 18, 2004 at reel 015492, frame 0112 of the assignment records of the Patent and Trademark Office.

**RELATED APPEALS AND INTERFERENCES**

Upon information and belief, the undersigned attorney does not believe that there is any appeal or interference that will directly affect, be directly affected by or have a bearing on the Board's decision in the pending appeal.

**REQUEST FOR AN ORAL HEARING**

An oral hearing is not requested at this time but appellant reserves the right to timely request one in accordance with 37 C.F.R. 41.47(b).

**STATUS OF THE CLAIMS**

The Application was filed with claims 1-7 on November 24, 2003, and assigned Application Serial No. 10/720,489.

In a first Office Action dated August 7, 2006, the Examiner rejected claims 4 and 6 under 35 U.S.C. §112, second paragraph, as allegedly failing to particularly point out and distinctly claim the subject matter which Appellant regards as the invention. In addition, claims 1-2 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent 4,649,074 to Borel. Claims 1-2 were rejected under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent Application Publication No. 2004/0033856 to Levin (hereinafter merely “Levin”). Claims 2 and 5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Borel in view of JP 10-29252. Claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over Levin in view of U.S. Patent No. 3,263,799 to Basscom.

In response to this first Office Action, Appellant filed an Amendment on November 7, 2006 amending claims 2-3, canceling claims 4 and 6 and arguing against the claim rejections.

The Examiner then issued a further Non-Final Office Action dated February 5, 2007, in which the Examiner rejected claims 1 and 7 under 35 U.S.C. §102(b) as allegedly anticipated by Levin. In addition, claim 1 was rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,932,756 to Franchi (hereinafter merely “Franchi”) in view of JP 4-24298. Claims 2 and 5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Levin in view of JP 10-29252. Claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over Levin in view of U.S. Patent No. 3,263,799 to Basscom.

In response to this Non-Final Office Action, Appellant filed a further Amendment on May 4, 2007 amending claims 1 and 5, adding new claims 8-12 and arguing against the claim rejections.

The Examiner then issued a Final Office Action dated August 9, 2007, in which the Examiner rejected claims 1, 5 and 10 under 35 U.S.C. §103(a) as allegedly unpatentable over Franchi in view of JP 4-24298 and further in view of JP 10-29252. In addition, claims 3, 8 and 11 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Franchi in view of JP 10-29252 and further in view of JP 10-29252 and further in view of U.S. Patent No. 3,263,799 to Basscom. Claims 7, 9 and 12 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Franchi in view of JP 10-29252 and further in view of JP 10-29252 and further in view of U.S. Patent No. 5, 514,456 to Lefferts.

In response to this Final Office Action, Appellant filed a response on October 31, 2007, arguing against the claim rejections.

An advisory action was issued on November 27, 2007 stating that the Appellant's arguments do not place the application in condition for allowance.

In response to this Advisory Action, Appellant filed a Notice of Appeal with a Pre-Appeal Brief Request for Review on January 9, 2008 appealing the final rejection. A Notice of Panel Decision from Pre-Appeal Brief Review was mailed April 1, 2008, maintaining the rejections in the Final Office Action. This Appeal Brief is being filed pursuant to the Notice of Appeal filed on January 9, 2008.

Accordingly, the status of the claims may be summarized as follows:

Claims allowed: None.

Claims Objected to: None.

Claims Rejected: 1, 3, 5 and 7-12

ClaimsAppealed: 1, 3, 5 and 7-12

Claims Canceled: 2, 4 and 6.

Rejected claims 1, 3, 5 and 7-12 are set forth in the Appendix attached hereto.

Appellant is appealing the Final Rejection of claims 1, 3, 5 and 7-12, which constitute all of the currently pending claims in this application.

#### **STATUS OF THE AMENDMENTS**

Appellant believes that all the submitted Amendments have been entered.

#### **SUMMARY OF THE CLAIMED SUBJECT MATTER**

Independent claim 1 is directed to a belt for use on a corrugator machine (50) in the manufacture of corrugated packaging board, the belt comprising an endless spiral-link base (1), the base (1) defining a top surface and a bottom surface and including a plurality of metal spirals (2, 4), each spiral (2, 4) defining an internal space (6, 8), wherein the spirals (2, 4) are interconnected by a series of parallel pintles (3) extending through the internal spaces (6, 8) of adjacent spirals (2, 4), wherein the belt is a singlefacer belt. *Instant Application*, paragraphs [0021]-[0032] and Figs. 2, 3, 4A and 4B.

Independent claim 5 is directed to a belt for use on a corrugator machine (50) in the manufacture of corrugated packaging board, the belt comprising an endless spiral-link base (1), the base (1) defining a top surface and a bottom surface and including a plurality of metal spirals (2, 4), each spiral (2, 4) defining an internal space (6, 8), wherein the spirals (2, 4) are interconnected by a series of parallel pintles (3) extending through the internal spaces (6, 8) of

adjacent spirals (2, 4), wherein the belt is a doublebacker belt. *Instant Application*, paragraphs [0021]-[0032] and Figs. 2, 3, 4A and 4B.

Independent claim 10 is directed to a singlefacer or doublebacker belt comprising an endless spiral-link base (1) including a plurality of metal spirals (2, 4) interconnected by a series of parallel pintles (3) extending through internal spaces (6, 8) defined by adjacent spirals. *Instant Application*, paragraphs [0021]-[0032] and Figs. 2, 3, 4A and 4B.

**GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL**

Whether claims 1, 5 and 10 are unpatentable under 35 U.S.C. §103(a) in view of Franchi in view of JP 4-24298 (hereinafter merely “JP ‘298”) and further in view of JP 10-29252 (hereinafter merely “JP ‘252”).

Whether claims 3, 8 and 11 are unpatentable under 35 U.S.C. §103(a) in view of Franchi in view of JP ‘252 and further in view of JP ‘252 and further in view of U.S. Patent No. 3,263,799 to Basscom (hereinafter merely “Basscom”).

Whether claims 7, 9 and 12 are unpatentable under 35 U.S.C. §103(a) in view of Franchi in view of JP ‘252 and further in view of JP ‘252 and further in view of U.S. Patent No. 5, 514,456 to Lefferts (hereinafter merely “Lefferts”).

## ARGUMENTS

### I. REJECTIONS UNDER 35 U.S.C. §103

Claims 1, 5 and 10 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Franchi in view of JP '298 and further in view of JP '252.

It is respectfully submitted that claims 1, 5 and 10 are patentable over the applied references for at least the following reasons:

#### A. Cited references do not teach all claim recitations

Independent claim 1 recites, *inter alia*:

“A belt for use on a corrugator machine in the manufacture of corrugated packaging board, said belt comprising:  
an endless spiral-link base, said base defining a top surface and a bottom surface and including a plurality of metal spirals, each spiral defining an internal space, wherein the spirals are interconnected by a series of parallel pintles extending through the internal spaces of adjacent spirals,  
wherein the belt is a singlefacer belt.” (Emphasis added)

Accordingly, one embodiment of the instant invention relates to a belt for use on a corrugator machine in the manufacture of corrugated packaging board, having an endless spiral-link base and including a plurality of metal spirals.

It is submitted that none of the cited references, considered either alone or in combination, teach or suggest the above identified feature of claim 1. Specifically, none of Franchi, JP '298 and JP '252, considered either alone or in combination, disclose or suggest using an endless spiral-link base made of metal spirals in a corrugator machine in the manufacture of corrugated packaging board, as recited in claim 1.

#### B. References Cannot Be Combined Because Reference Teaches Away from Their Combination

As understood by the Appellant, Franchi relates to a continuous corrugator belt for supporting/conveying a sheet of cardboard, defined by a mat of multispiral fabric *preferably made of synthetic polymer fibers*. *Franchi*, Col. 3, lines 54-64.

Franchi specifically teaches that felts or conventional fabrics are relatively heavy and therefore difficult to assemble onto the machine; the weight, combined with a high friction coefficient, of such materials increases the energy consumption of the machine. *Id*, Col. 1, 37 - 44, Col. 2, 32-47. Therefore, one of Franchi's main objectives is to reduce the friction coefficient by reducing the weight of the belt and eventually reducing energy consumption.

JP '298, on the contrary, is teaching away from Franchi in that both the spiral wiry materials (2a) and the connecting wiry materials (2b) are preferably formed from a metal, and since the whole belt in JP '298 is formed of wiry materials, it is certainly going to increase the weight of the belt, thus increasing the friction coefficient and energy consumption.

Additionally, while Franchi relates to corrugator belts, JP '298 relates purely to a coated shoe press belt. There is no teaching or suggestion for use of metal spirals in Franchi, and there is no teaching or suggestion in JP '298 for using its belt on a corrugator machine.

Quite contrarily, Franchi avoids using any heavy materials for the spirals in order to avoid any weight on the belt. As to JP '252, it merely teaches a corrugating machine. Although JP '252 merely mentions single facer and double backer belts, there is no teaching or suggestion for using metal spiral coils, or even spiral coils for that matter. Therefore, it is *not* obvious for one of ordinary skill in the art to modify the teachings of Franchi in view of JP '298 and/or JP '252, when there is no motivation. Specifically, it is non-obvious for a skilled artisan to use metal spirals in Franchi's belt, when the primary reference, Franchi itself teaches away from the combination.

MPEP §2145(X)(d) states:

**“It is improper to combine references where the references teach away from their combination.** *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983) (The claimed catalyst which contained both iron and an alkali metal was not suggested by the combination of a reference which taught the interchangeability of antimony and alkali metal with the same beneficial result, combined with a reference expressly excluding antimony from, and adding iron to, a catalyst.)” (Emphasis added)

The motivation or teaching to make the claimed combination by modifying or combining prior art references must be found in the prior art and ***not*** in the Appellant’s disclosure. *In re Vaeck*, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). There is nothing that would motivate a skilled worker in the art to modify the teachings of Franchi in view of JP ‘298 or JP ‘252, when Franchi lacks the very motivation to do so.

MPEP §2145(X)(c) states:

As discussed in MPEP §2143.01, ***there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine reference teachings.*** The Federal Circuit has produced a number of decisions overturning obviousness rejections due to a lack of suggestion in the prior art of the desirability of combining references, as discussed in the aforementioned section. (Emphasis added)

Appellant further submits that the Final Office Action has relied on impermissible hindsight. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, even if the cited references are from the same/related field, there must be some suggestion or motivation to modify the reference or to combine reference teachings either in the references themselves or in the general knowledge available to one of ordinary skill in the art; second, there must be a reasonable expectation of success; third, the prior art reference or references must teach or suggest all the claim limitations. M.P.E.P. § 2143. It is, however, impermissible for the

Examiner to use hindsight based on an Appellant's disclosure to determine that an Appellant's invention is obvious in view of the cited art. M.P.E.P. § 2142.

Further, in *Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340 (January 27, 2000), *reh 'g en banc denied* (March 6, 2000), *cert. denied*, 120 S. Ct. 2679 (U.S. 2000), it was held that:

"Although a reference need not expressly teach that the disclosure contained therein should be combined with another, the showing of combinability, in whatever form, must nevertheless be ‘clear and particular.’" (Emphasis added).

Additionally, Appellant submits that the Examiner may not use the claimed invention as an "instruction manual" or "template" to piece together the teachings of the prior art so that the invention is rendered obvious. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). Such reliance is an impermissible use of hindsight with the benefit of Appellant's disclosure. *Id.* Furthermore, even if the Examiner has located all the limitations of the claimed present invention, still a fundamental notion of patent law is the concept that invention lies in the new combination of old elements. Therefore, a rule that every invention could be rejected as obvious by merely locating each element of the invention in the prior art and combining the references to formulate an obviousness rejection is inconsistent with the very nature of "invention." Consequently, a rule exists that a combination of references made to establish a *prima facie* case of obviousness must be supported by some teaching, suggestion, or incentive contained in the prior art which would have led one of ordinary skill in the art to make the claimed invention. The inquiry is not whether each element existed in the prior art, but whether the invention as a whole is obvious in light of the prior art. *Hartness International, Inc. v. Simplimatic Engineering Co.*, 819 F.2d 100, 2 U.S.P.Q.2d 1826 (Fed. Cir. 1987).

In *KSR v Teleflex* the Supreme Court had endorsed that:

“If a person of ordinary skill in the art can implement a predictable variation, and would see the benefit of doing so, §103 likely bars its patentability.” (Emphasis added)

However, in the instant case, Franchi does not see any ‘benefit’ in replacing his synthetic polymer spirals with metal spirals, which is clearly evidenced by Col. 1, 37 - 44, Col. 2, 32-47 and Col. 3, lines 54-64 of Franchi.

The Supreme Court further endorsed that:

“... A patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art. Although common sense directs caution as to a patent application claiming as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the art to combine the elements as the new invention does. Inventions usually rely upon building blocks long since uncovered, and claimed discoveries almost necessarily will be combinations of what, in some sense, is already known ... Since the TSM test was devised, the Federal Circuit doubtless has applied it in accord with these principles in many cases. There is no necessary inconsistency between the test and the *Graham* analysis.”

In *United States v. Adams*, 383 U. S. 39, 40 (1966), the Court relied upon the corollary principle that when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious. *Id.*, at 51–52. When Adams designed his battery, the prior art warned that risks were involved in using the types of electrodes he employed. The fact that the elements worked together in an unexpected and fruitful manner supported the conclusion that Adams’s design *was not obvious to those skilled in the art*. Appellant, therefore, respectfully submits that the instant case is also not ‘obvious to try.’

C. Impermissible hindsight reasoning and mosaic reconstruction

It is further submitted that *impermissible hindsight* reconstruction of the claimed invention using elements of the prior art is *not* allowed under 35 U.S.C. §103 (see MPEP §2142 for a discussion of impermissible hindsight).

Furthermore, MPEP §2143.01(III) states:

“The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)”  
(Emphasis in original)

It is respectfully submitted that the Final Office Action has merely created a mosaic of features from the prior art, without either a clear suggestion of the desirability of the combination.

Additionally, MPEP §2143.01(IV) states:

A statement that modifications of the prior art to meet the claimed invention would have been “well within the ordinary skill of the art at the time the claimed invention was made” because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993).  
(Emphasis added)

As noted above, the Office Action has merely provided references to teach individual aspects of the claimed invention in total isolation, and has not established a *prima facie* case of obvious. The Office Action has failed to provide an objective reason to *combine* the disparate and unrelated teachings of the references into the claimed combination. Therefore, it is submitted that the combination of references is inappropriate, and the withdrawal of the rejections is respectfully requested.

Additionally, the Examiner has not shown sufficient obviousness reason for a person of ordinary skill in the art to combine the teachings of Franchi with JP '298 or JP '252. There is no suggestion in Franchi for using any material other than a synthetic polymeric fiber, because Franchi's intention is to produce a low weight multispiral fabric. In fact, Franchi discloses that he does not intend to increase the weight of the fabric. The Examiner uses metal spirals of JP '298 in Franchi to show low elongation, dimensional regulation and excellent durability. However, using metal spirals in Franchi's fabric would defeat his prime objective of keeping the fabric weight low. As to JP '252, there is no teaching or suggestion of using a metal-spiral belt on the machine. Therefore, there is no connecting link between Franchi and JP '252.

For at least the foregoing reasons, it is submitted that independent claim 1 patentably distinguishes over the cited references. Since independent claims 5 and 10 are similar in scope to claim 1, they are also patentable.

Claims 3, 8 and 11 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Franchi in view of JP '298 and further in view of JP '252 and further in view of Basscom.

Appellant submits that Basscom, which relates to a conveyor belt, also fails to teach or suggest the above identified features of the instant claims. Specifically, Basscom fails to disclose a belt as claimed in claim 1, wherein the spiral-link base comprises stainless steel, as recited in claim 3.

Additionally, the relied upon combination fails to teach or suggest a belt as claimed in claim 5, wherein the spiral-link base comprises stainless steel, as recited in claim 8.

Additionally, the relied upon combination fails to teach or suggest a belt as claimed in claim 10, wherein the spiral-link base comprises stainless steel, as recited in claim 11.

Claims 7, 9 and 12 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Franchi in view of JP '298 and further in view of JP '252 and further in view of Lefferts.

Appellant submits that Lefferts, which relates to a spiral link belt having a plurality of plastic helices connected to one another using pintle wires also fails to provide for the features discussed above. Specifically, Lefferts fails to teach or disclose a belt as claimed in claim 1, which also includes filler means disposed within the spirals, as recited in claim 7.

Additionally, Lefferts fails to teach or disclose a belt as claimed in claim 5, which also includes filler means disposed within the spirals, as recited in claim 9.

Additionally, Lefferts fails to teach or disclose a belt as claimed in claim 10, which also includes filler means disposed within the spirals, as recited in claim 12.

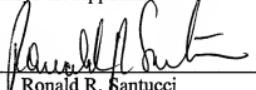
Therefore, Appellant respectfully submits that all the claims in the instant application are patentable over the cited art, considered either alone or in combination.

**CONCLUSION**

For the reasons discussed above, claims 1, 3, 5 and 7-12 are patentable. It is, therefore, respectfully submitted that the Examiner erred in rejecting claims 1, 3, 5 and 7-12, and Appellant requests a reversal of these rejections by this Honorable Board. As a result, the allowance of this application should be mandated.

Respectfully submitted,

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**APPENDIX I**

**CLAIMS ON APPEAL**

1. (Previously Presented) A belt for use on a corrugator machine in the manufacture of corrugated packaging board, said belt comprising:

an endless spiral-link base, said base defining a top surface and a bottom surface and including a plurality of metal spirals, each spiral defining an internal space, wherein the spirals are interconnected by a series of parallel pintles extending through the internal spaces of adjacent spirals,

wherein the belt is a singlefacer belt.

2. (Cancelled)

3. (Previously Presented) The belt of claim 1, wherein the spiral-link base comprises stainless steel.

4. (Cancelled)

5. (Previously Presented) A belt for use on a corrugator machine in the manufacture of corrugated packaging board, said belt comprising:

an endless spiral-link base, said base defining a top surface and a bottom surface and including a plurality of metal spirals, each spiral defining an internal space, wherein the spirals are interconnected by a series of parallel pintles extending through the internal spaces of adjacent spirals,

wherein the belt is a doublebacker belt.

6. (Cancelled)

7. (Original) The belt of claim 1, further comprising filler means disposed within said spirals.

8. (Previously Presented) The belt of claim 5, wherein the spiral-link base comprises stainless steel.

9. (Previously Presented) The belt of claim 5, further comprising filler means disposed within said spirals.

10. (Previously Presented) A singlefacer or doublebacker belt comprising:  
an endless spiral-link base including a plurality of metal spirals interconnected by a series of parallel pintles extending through internal spaces defined by adjacent spirals.

11. (Previously Presented) The belt of claim 10, wherein the spiral-link base comprises stainless steel.

12. (Previously Presented) The belt of claim 10, further comprising filler means disposed within said spirals.

**APPENDIX II**

**EVIDENCE**

None

**APPENDIX III**  
**RELATED PROCEEDINGS**

None